

ELEIRO

Data processing computer



Data processing computer for DIGI SENS digital transducers; especially for sensors with an oscillating wire.

Application

The ELEIRO is used for the collection and processing of the measured data from DIGI SENS transducers. It is designed particularly for applications in which the load-cell signals must be combined and processed parallel, often by means of complex algorithms. Thanks to its digital inputs and outputs and its interfaces it can carry out complex control and drive functions autonomously.

The robust construction and the water-tight stainless-steel housing enable its use outside, on vehicles and in industrial installations.

Features

- Up to 1000 measurements per second and per cell (depending on the application)
- Resolution down to 1 ppm
- Flexible adaptation to local conditions thanks to modular construction and extensions
- Communication: serial interfaces (RS-232) and CAN-Bus (2x)
- Modularly extensible digital inputs and outputs
- Modularly extensible serial interfaces (RS-232/422/485)
- Configuration via the website
- LCD- display
- Calibration capability according to OIML R51



- EMC tested according to EN61326-1, EN61000-3-2&3, Grange CCG001/B
- Water-tight stainless steel housing

Description

The ELEIRO is a central processing unit from DIGI SENS. It has 10 inputs for load cells with the DIGI SENS 4W interface or 6 inputs for load cells with DIGI SENS 8W interface. From the inbuilt EEPROM the load cells instruct the processor how the measuring results are to be processed. The ELEIRO is able to generate a large number of measurement results in real-time and to combine these with one another.

The ELEIRO is configured via an intuitive website, in a similar way to routers. This procures two main advantages:

1. The LAN interface is today's standard for every PC and Notebook. The service technician can rapidly and easily connect to the ELEIRO using a standard LAN cable.
2. The interface is independent of the platform. The configuration can be carried out

via a browser on a Windows, Mac or Linux computer. The service technician can also work with his preferred software.

The LAN interface is not limited to just configuring the ELEIRO. It is also possible for the end-customer to ask for information about the system or to carry out certain adjustments. The intermediate customer has the possibility of adapting the colours of the website to his market and placing his logo on every page.

Actual messages are shown on the LCD display.

The software is so designed that the individual software modules are clearly separated. As a result the individual routines can be operated at various "security levels". This presents the following advantages:

Software modules that are not liable for calibration can also be replaced in a calibrated system.

As a result updates can be carried out without an expensive re-calibration.

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Technical Data

Processing unit and memory

- ARM9 Processor 400 MHz
- 64 MB SDRAM
- 128 MB NAND Flash
- micro SD card
- real-time clock with battery back-up
- 1 MB SRAM with battery back-up

Interfaces

- Ethernet
- 2 CAN-interfaces
- 1 asynchronous or synchronous serial interfaces RS232
- Modularly extensible*
- Measuring module (FPGA) for dynamic applications with 10 inputs 4W cells
- Measuring module (FPGA 8W) for dynamic application with 6 inputs for retrofit of METIRON cells (8 Wire)
- 3 digital inputs and 2 digital outputs per I/O module. Maximum 4 modules
- 2 configurable serial interfaces RS232/RS485/RS422 per serial module. Maximal 2 modules

* A maximum of one measuring module and four further modules can be connected.

** The yellow modules are optional

Software and operation

- Linux operating system
- Configuration via website
- LCD-display

Mechanical characteristics and certificates

- Stainless steel housing with cable stuffing glands (all connecting cables as required) and vibration dampers
- Housing dimensions: 200 x 280 x 95 mm (Standard housing, other housings on request)
- Protection class IP66
- Calibration capability according to OIML R51
- E-certificate for vehicles
- EN61326-1, EN61000-3-2&3, Grange CCG001/B

Operating parameters

- 9 ... 40 V supply voltage
- 3.5 ... 4 W typical power consumption
- -40 ... 85 °C operating temperature without display
- -20 ... 50 °C operating temperature with display

Applications

- Refuse catchweighers
- Lorry superstructures
- Hoists and fork lifters
- Dumper-trucks
- Lorry and railway containers
- Forces in robots and automatic machines
- Dynamic weighbridges for road vehicles
- etc.

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FPGA module sensor 1 to sensor 10	1x LAN 1x RS232 2x CAN
Display module	1x SDCard
Serial module(s) 0 to 4 serial interface RS232/RS422/RS485	I/O module(s) 0 to 6 digital output 0 to 12 digital input

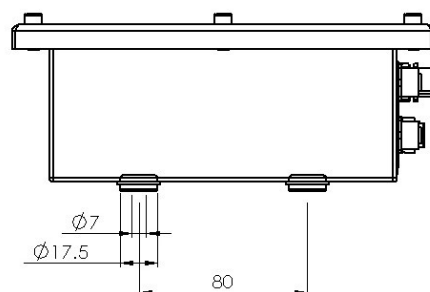
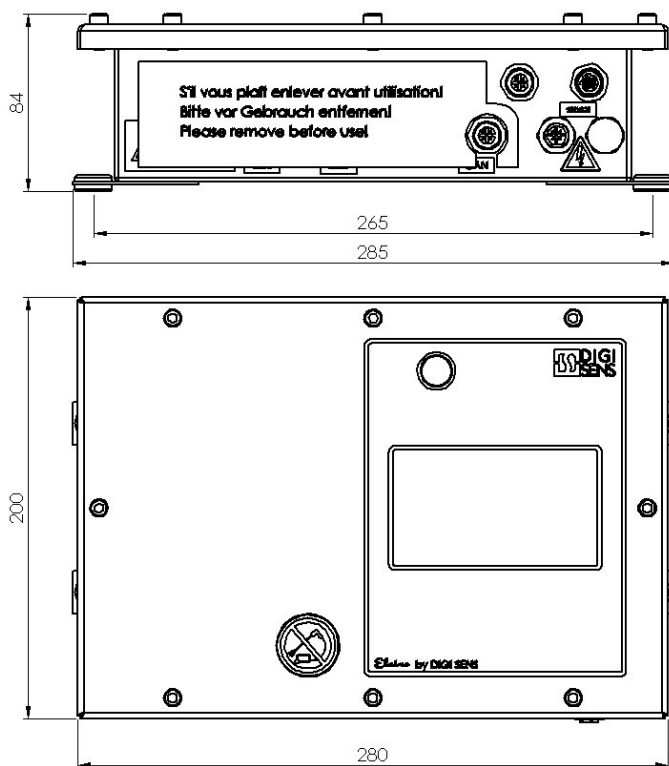
ELEIRO 8W

FPGA 8W module sensor 1 to sensor 6	1x LAN 1x RS232 2x CAN
Display module	1x SDCard
Serial module(s) 0 to 4 serial interface RS232/RS422/RS485	I/O module(s) 0 to 6 digital output 0 to 12 digital input

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Dimensional drawing



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